



Description

The ENP4836 uses advanced trench technology to provide excellent RDS(ON) with low gate charge. This device is suitable for high side switch in SMPS and general purpose applications.

General Features

- VDS=30V, ID =8A
RDS(ON)=15.5mΩ (typical) @ VGS=10V
RDS(ON)=19.2mΩ (typical) @ VGS=4.5V
- Excellent gate charge x RDS(ON) product (FOM)
- Very low on-resistance RDS(ON)
- 150 °C operating temperature
- Pb-free lead plating
- 100% UIS tested

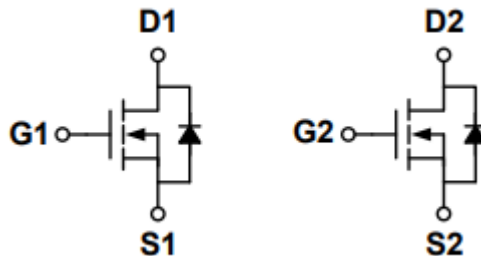
Application

- DC/DC Converter
- Ideal for high-frequency switching and synchronous rectification

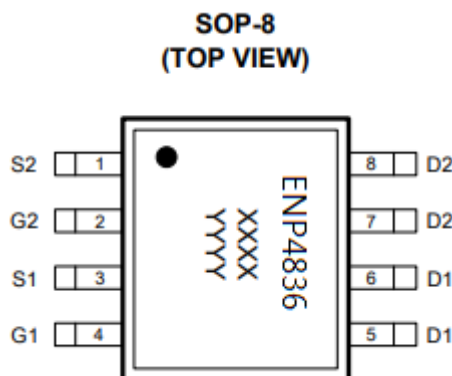
Package

- SOP-8

Schematic diagram



Marking and pin assignment



Note : XXXX is the date code, YYYY is the Quality Code.



Ordering Information

ENP4836 XX GR

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M1=SOP-8

Absolute Maximum Ratings (TA=25°C unless otherwise noted)

parameter	symbol	limit	unit	
Drain-source voltage	VDS	30	V	
Gate-source voltage	VGS	±20	V	
Drain Current-Continuous (Silicon Limited)	ID	TA=25°C	8	A
		TA=75°C	6.5	
Pulsed Drain Current (Package Limited)	IDM	35	A	
Single pulse avalanche energy	EAS	30	mJ	
Maximum power dissipation	PD	TA=25°C	2	W
		TA=75°C	1.3	
Operating junction Temperature range	Tj	-55—150	°C	

**Electrical Characteristics** (TA=25°C unless otherwise noted)

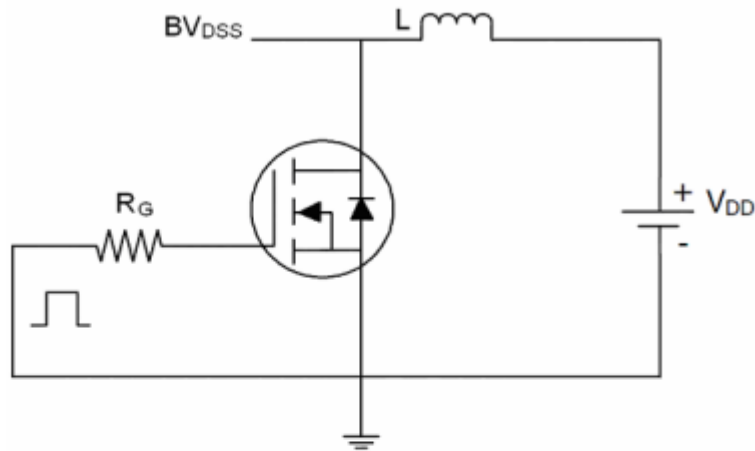
Parameter	Symbol	Condition	Min	Typ	Max	Unit
OFF Characteristics						
Drain-source breakdown voltage	BVDSS	VGS=0V, ID=250μA	30	-	-	V
Zero gate voltage drain current	IDSS	VDS=30V, VGS=0V	-	-	1	μA
Gate-body leakage	IGSS	VDS=0V, VGS=±20V	-	-	±100	nA
ON Characteristics						
Gate threshold voltage	VGS (th)	VDS=VGS, ID=250μA	1.0	1.6	3.0	V
Drain-source on-state resistance	RDS(ON)	VGS=10V, ID=8A	-	15.5	20	mΩ
		VGS=4.5V, ID=7A	-	19.2	28	
Forward transconductance	gfs	VDS=5V, ID=8A	-	43	-	S
Dynamic Characteristics						
Input capacitance	CISS	VDS=15V, VGS=0V f=1.0MHz	-	550	715	pF
Output capacitance	COSS		-	110	-	
Reverse transfer capacitance	CRSS		-	55	-	
Gate resistance	Rg	VGS=0V, VDS=0V, f=1.0MHz	-	4	4.9	Ω
Switching Characteristics						
Turn-on delay time	tD (ON)	VDS=15V VGS=10V RL=1.5Ω RGEN=3Ω	-	4.4	-	ns
Rise time	tr		-	9	-	
Turn-off delay time	tD (OFF)		-	17	-	
Fall time	tf		-	6	-	
Total gate charge	Qg	VDS=15V, ID=10A VGS=10V	-	9.8	-	nC
Gate-source charge	Qgs		-	1.8	-	
Gate-drain charge	Qgd		-	2.4	-	

Thermal Characteristics

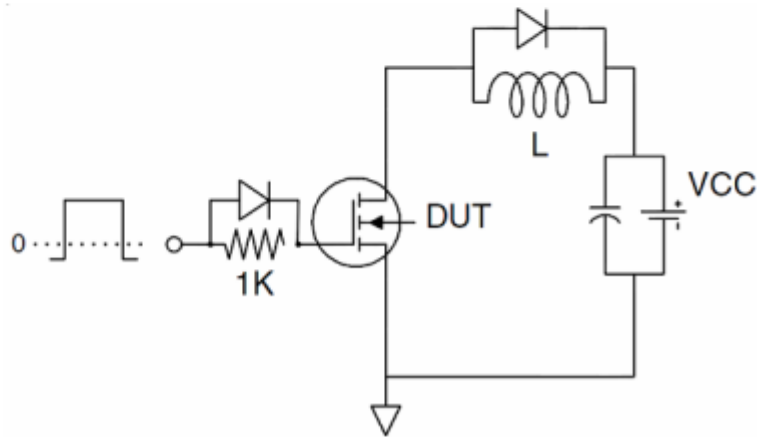
Thermal Resistance junction-to ambient	Rth JA	100	°C/W
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Test Circuit :

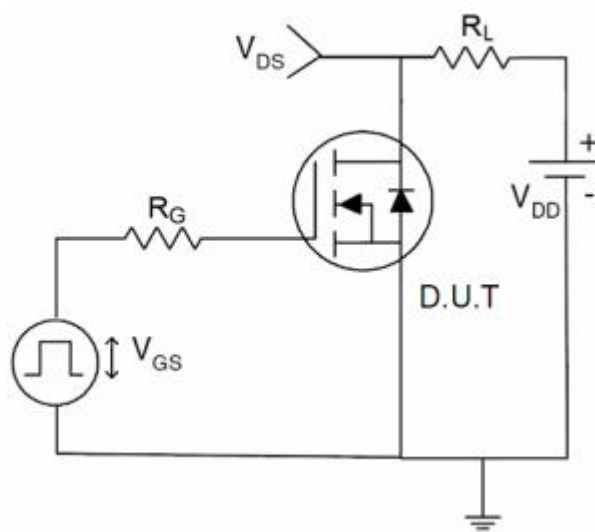
(1)、EAS Test Circuit



(2)、Gate Charge Test Circuit

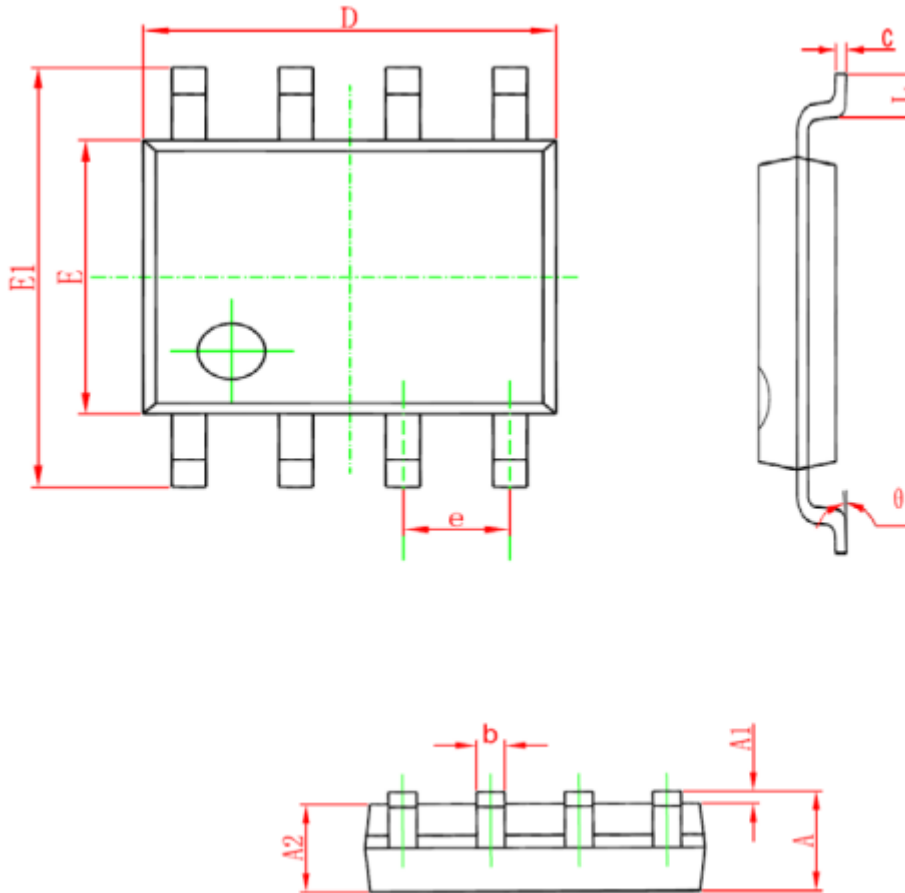


(3)、Switch Time Test Circuit



Package Information

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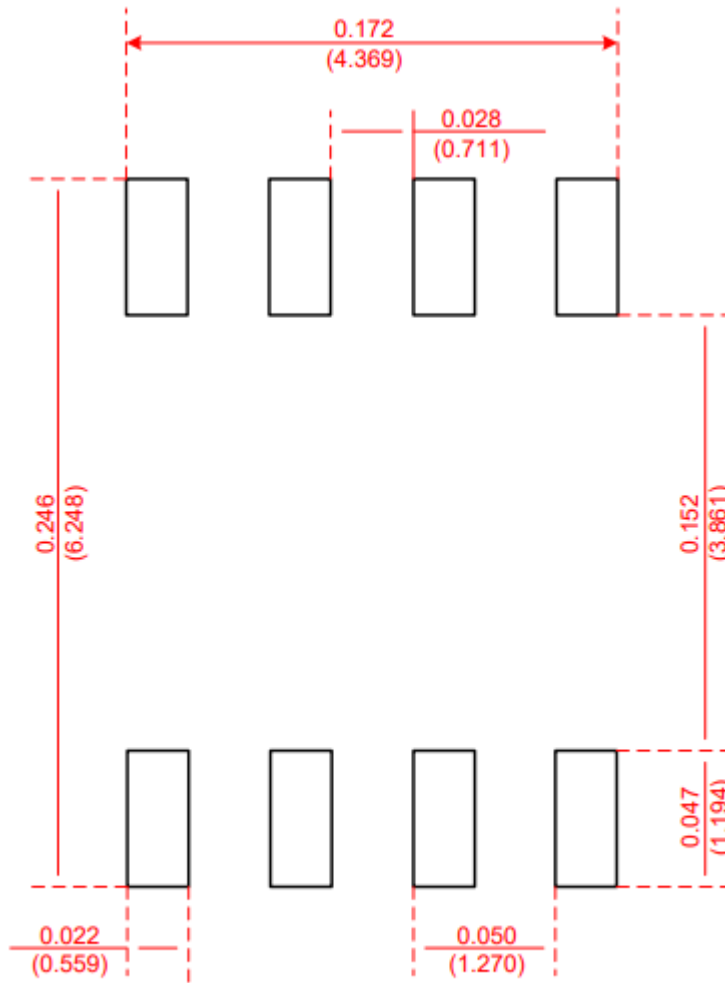


Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.350	1.750	0.053	0.069
A1	0.100	0.250	0.004	0.010
A2	1.350	1.550	0.053	0.061
b	0.330	0.510	0.013	0.020
c	0.170	0.250	0.006	0.010
D	4.700	5.100	0.185	0.200
E	3.800	4.000	0.150	0.157
E1	5.800	6.200	0.228	0.244
e	1.270 (BSC)		0.050 (BSC)	
L	0.400	1.270	0.016	0.050
θ	0°	8°	0°	8°



Recommended Minimum Pads

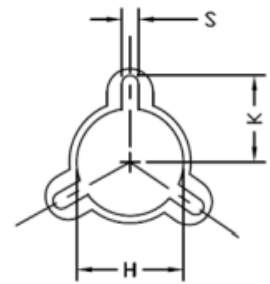
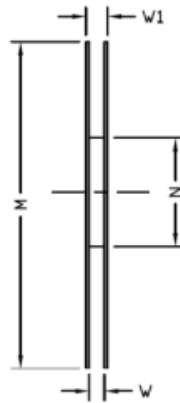
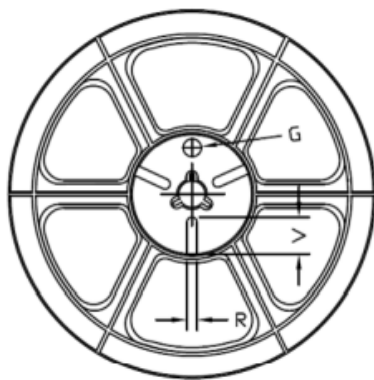
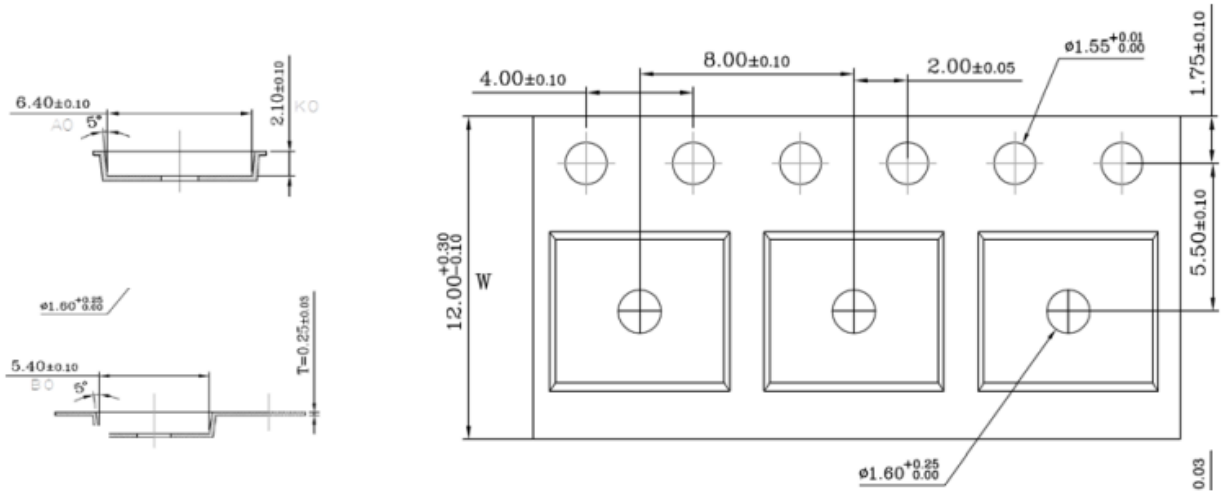
- SOP-8



Recommended Minimum Pads
Dimensions in Inches/(mm)



Tape and Reel



Tape Size	Reel Size	M	N	W	W1	H	K	S	G	R	V
12mm	Φ330	Φ330.00 ±0.50	Φ97.00 ±0.30	13.00 ±0.30	17.40 ±1.00	Φ13.00 ±0.5	10.6	2.00 ±0.50	—	—	—

Unit Per Reel:
4000pcs

